

What is claimed is:

1. An injectable viscoelastic gel particularly adapted for use in ophthalmic surgical procedures and treatments which gel consisting essentially of from about 2 to about 5 percent by weight of a polymer selected from polyacrylamide and polymethacrylamide, said polymer having a molecular weight of from about 1 to about 6 million; from about 0.4 to about 8.6 percent by weight sodium chloride, from about 0.075 to about 0.3 percent by weight potassium chloride, from about 0.04 to about 0.33 percent by weight calcium chloride, from about 0.02 to about 0.04 percent by weight magnesium chloride hexahydrate, from about 0.3 to about 0.4 percent by weight sodium acetate, from about 0.15 to about 0.20 percent by weight of a buffer, remainder water.

2. A gel as defined in claim 1 wherein said polymer is polyacrylamide.

3. A gel as defined in claim 1 wherein said polymer is present in an amount of from about 3.5 to about 4.5 percent by weight.

4. A gel as defined in claim 1 wherein said polymer has a molecular weight of from about 4.5 to about 5.5 million.

5. A gel as defined in claim 1 wherein said buffer is sodium citrate dihydrate.

6. A gel as defined in claim 1 consisting essentially of about 4 percent by weight of said polymer having a molecular weight of about 5 million, about 0.49 percent by weight sodium chloride, about 0.075 percent by weight potassium chloride, about 0.048 percent by weight calcium chloride, about 0.03 percent by weight magnesium chloride hexahydrate, about 0.17 percent by weight sodium citrate dihydrate, remainder water.

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Claim 1

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7. A ophthalmic surgical method comprising administration by injection of an effective amount of a pharmaceutical composition which comprises acrylamide or methacrylamide polymers or copolymers thereof having a molecular weight from about 1 to about 6 million and a pharmaceutically acceptable diluent into the eye of a patient.

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8. A method of claim 7, wherein the polymers or copolymers are present in an amount between about 2 to about 5 percent by weight of the pharmaceutical composition.

9. A method of claim 7, wherein the polymers or copolymers are present in an amount between about 3.5 to about 4.5 percent by weight of the pharmaceutical composition.

10. A method of claim 7, wherein the polymers or copolymers are present in an amount between about 4.5 to about 5.5 percent by weight of the pharmaceutical composition.

11. A method of claim 7, wherein the polymers or copolymers are present in an amount of about 4 percent by weight of the pharmaceutical composition.

12. A method of claim 7, wherein said polymer is polyacrylamide.

13. A method of claim 7, wherein the pharmaceutical

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composition comprises

- (a) 2 to 5 percent by weight acrylamide or methacrylamide polymers or copolymers;
- (b) 0.4 to 8.6 percent by weight sodium chloride;
- (c) 0.075 to 0.3 percent by weight potassium chloride;
- (d) 0.04 to 0.33 percent by weight calcium chloride;
- (e) 0.02 to 0.04 percent by weight magnesium chloride hexahydrate;
- (f) 0.3 to 0.4 percent by weight sodium acetate;
- (g) 0.15 to 0.20 percent by weight buffering agent; and
- (h) remainder water.

14. A method of claim 13, wherein said buffering agent is sodium citrate dihydrate.

15. A method of claim 7, wherein the pharmaceutical composition comprises about 4 percent by weight of said polymer having a molecular weight of about 5 million, about 0.49 percent by weight sodium chloride, about 0.075 percent by weight potassium chloride, about 0.048 percent by weight calcium chloride, about 0.03 percent by weight sodium citrate dihydrate,

and the remainder water.

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